

In[122]:=

```
a = Input["Enter the left end point"];
b = Input["Enter the right end point"];
n = Input["Enter the number of sub intervals"];
h = (b - a)/n;

f[x_] := Log[x];

sumMid = 0;
For[i = 1, i < n, i++,
  sumMid += f[a + i*h];
];

Tn = h*((f[a] + f[b])/2 + sumMid);

Print["For n = ", n, ", Trapezoidal estimate is : ", N[Tn]];

trueValue = Integrate[Log[x], {x, a, b}] // N;
Print["True value is ", trueValue];

Print["Absolute error is ", Abs[Tn - trueValue]];

For n = 10, Trapezoidal estimate is : 1.82778
True value is 1.82785
Absolute error is 0.0000692117
```